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| APPLICATION NO.                        | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/764,908                             | 01/26/2004  | Fang Lei             | 02581- P0553A       | 3365             |
| 24126                                  | 7590        | 10/03/2005           | EXAMINER            |                  |
| ST. ONGE STEWARD JOHNSTON & REENS, LLC |             |                      | NGUYEN, THONG Q     |                  |
| 986 BEDFORD STREET                     |             |                      | ART UNIT            |                  |
| STAMFORD, CT 06905-5619                |             |                      | PAPER NUMBER        |                  |
|  |             |                      | 2872                |                  |

DATE MAILED: 10/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/764,908

Applicant(s)

LEI, FANG

Examiner

Thong Q. Nguyen

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 11-22 is/are pending in the application.
- 4a) Of the above claim(s) 2,4,15 and 18-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-9,11-14,16 and 17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 July 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

1. The present Office action is made in response to the amendment filed on 7/18/05. It is noted that in the mentioned amendment, applicant has made changes to the specification, the drawings and the claims.

Regarding to the claims, it is noted that applicant has amended claims 1, 5, 8-9, 13 and 17 and canceled claim 10. The pending claims are claims 1-9 and 11-22 in which claims 2, 4, 15 and 18-22 were withdrawn from further examination as being directed to non-elected species. Claims 1, 3, 5-9, 11-14 and 16-17 are examined in this Office action.

### ***Priority***

2. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in German on July 26, 2001. It is noted, however, that applicant has not filed a certified copy of the Germany application as required by 35 U.S.C. 119(b).

*It is noted that the objection to the priority claim as set forth above was made in the previous Office action, page 3, item 4. However, applicant has not responded to the objection.*

### ***Drawings***

3. The drawings contained seven sheets of figures 1-7 were received on 7/18/05. These drawings except figure 1 are approved by the Examiner.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the

description: The numerical references "21" and "31" shown in figure 1 are not mentioned in the specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

*It is noted that in the amendment, page 14, the second paragraph, applicant has stated that the references "21" and "31" have been removed; however, such references are still shown in figure 1 of the corrected drawings filed on 7/18/05.*

### **Specification**

5. The lengthy specification which is amended by the amendment of 7/18/05 has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

6. The disclosure is objected to because of the following informalities: a) Page 6, Section [00024], it is unclear about the term "1" shown in the column indicated the surfaces of the lens system. It is suggested that the terms "Surface No. 1" should be

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changed to --Surface No. -- ; b) In the amendment, in page 11, it is unclear about the materials which applicant wishes to add into the application. In particular, in page 11 applicant has requested to enter a headline before the paragraph 00023. However, as shown in pages 11-12 of the amendment, it seems that applicant intends to add brief descriptions of figures 1-7 into the application. A clarification for the materials stated in pages 11-12 of the amendment must be provided. Further, in the material provided in page 12 of the amendment, the term "suing" appeared on line 1 should be changed to --using--.

***Claim Rejections - 35 USC § 112***

7. The rejection of claim 10 under 35 USC 112, first paragraph has been overcome by the cancellation of the claim as indicated in the amendment of 7/18/05.

***Claim Objections***

8. The objections to the claims 1, 5, 8-9, 13 and 17 have been overcome by the amendments to the claims as indicated in the amendment of 7/18/05.

***Claim Rejections - 35 USC § 102***

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10. Claims 1, 8-9, 11-14 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi et al (U.S. Patent No. 5,743,846, of record).

Takahashi et al disclose an endoscope having an image transmission system. In the embodiment as described in columns 23 and 49-50 and shown in figure 21, the image transmission system (52) comprises a plurality of image transmission

units (52a-c) in which each unit comprises a center rod lens element and two outer rod lens elements disposed on the opposite sides of the center rod lens element and in a symmetrical to one another with respect to the center lens element which in combination form a cylinder. Each of the center rod lens element is a combination of a rod main lens element and two cemented lens elements cemented to the main rod element to form a biconvex center rod lens element. It is noted that the center rod lens element is symmetrical with respect to its center plane perpendicular to the optical axis of the image transmission unit and the lens surfaces of the main rod lens element and the cemented lens elements are also symmetrical with respect to the center plane perpendicular to the optical axis of the image transmission unit and the center rod lens element. Each of the outer rod lens elements is a biconvex lens element and the rod lens elements are arranged in a vertex-to-vertex adjacent configuration to one another without any distancing tubes located between two adjacent rod lens elements. Regarding to the material of the lens elements, Takahashi et al disclose that the material of the lens elements is homogenous material (see column 30, lines 55+). Regarding to the lengths of the center rod lens element and the outer rod lens elements and the curvature of the lens surfaces, it is noted that in the data provided in Table 7, columns 49-50, the lens surfaces have spherical configurations and the length of the center rod lens element is about 31.769 which is essentially of the same length of each outer rod lens element which is about 31.479.

***Claim Rejections - 35 USC § 103***

11. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
12. Claims 3, 5-7 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al in view of Takahashi (Japanese reference No. 61-20015, of record).

The endoscope having image transmission system wherein each units of the mage transmission system comprises a center rod lens element and two outer rod lens elements as provided by Takahashi et al does not disclose that the center lens element is a combination of a center biconcave lens elements and two biconvex lens elements cemented to the biconcave lens elements on its opposite sides as recited in present claim 3 or the center rod lens element is combination of a center biconvex lens elements and two meniscus lens elements cemented to the biconvex lens elements on its opposite sides as recited in present claims 5-7. However, the use of an image transmission system having a plurality of image transmission units each comprises a center rod lens and two outer rod lens elements wherein the center rod lens element is a combination of a center biconcave lens elements and two biconvex lens elements cemented to the biconcave lens elements on its opposite sides or the center rod lens element is combination of a center biconvex lens elements and two meniscus lens elements cemented to the biconvex lens elements on its opposite sides is known to one skilled in the art as can be seen in the endoscope having an image

transmission system provided by Takahashi (Japanese reference No. 61-20015; hereafter '015). In particular, the image transmission unit as described in page 93 and shown in figures 4 comprises a center rod lens and two outer rod lens elements wherein the center rod lens element is a combination of a center biconcave lens elements and two biconvex lens elements cemented to the biconcave lens elements on its opposite sides . It is also noted that each of the outer rod lens element is a single piece. In other embodiment, Takahashi discloses an image transmission unit having a center rod lens and two outer rod lens elements wherein the center rod lens element is combination of a center biconvex lens elements and two meniscus lens elements cemented to the biconvex lens elements on its opposite sides. See the embodiments provided in pages 93-94 and shown in figures 6 and 8. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the mage transmission system as provided by Takahashi et al by using an image transmission system having plural image transmission units each having a center rod lens and two outer rod lens elements wherein the center rod lens element is a combination of a center biconcave lens elements and two biconvex lens elements cemented to the biconcave lens elements on its opposite sides or the center rod lens element is combination of a center biconvex lens elements and two meniscus lens elements cemented to the biconvex lens elements on its opposite sides as suggested by Takahashi '015 for the purpose of providing other means for correcting the image aberrations.



***Response to Arguments***

13. Applicant's arguments filed on 7/18/05 have been fully considered but they are not persuasive for the following reasons.

In the amendment, applicant has argued that Takahashi reference does not disclose the feature that all of optically active surfaces of the lens elements are spherical. The Examiner is respectfully disagreed and respectfully invited the applicant to review the art of Takahashi and the rejection. In particular, in the rejection, the Examiner has clearly stated that the features related to the spherical surfaces are disclosed by Takahashi as provided in Table 7, columns 49-50.

Regarding to the applicant's arguments related to the structure of the lens elements provided by Takahashi as provided in the amendment, page 15, the last paragraph, it is noted that such arguments are not persuasive. Applicant should note that the present claims of the application is rejected by the Takahashi reference because the features recited in the present claims are met by the lens system described in the embodiment provided in columns 23 and 49-50 and shown in fig. 21 of the Takahashi reference. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Regarding to the rejection of claims 3, 5-7 and 17 under 35 USC 103(a) over the art of Takahashi and the Japanese reference No. 61-20015, it is noted that

applicant has not provided any specific arguments except the argument that the combination of art does not disclose the feature of spherical surfaces of the lens elements, and thus the claims are still rejected for the same reason as set forth in the previous Office action and repeated in this Office action.

***Conclusion***

14. The additional references are cited as of interest in that each discloses an image transmission system having lens elements whose lens surfaces are spherical surfaces. See Patent 6,088,157 (columns 5-6); Patent 4,970,546 (column 5) and Patent 5,097,359 (columns 4-5).

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

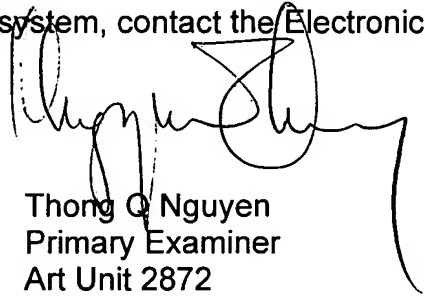
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q. Nguyen whose telephone number is (571) 272-2316. The examiner can normally be reached on M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A. Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thong Q. Nguyen  
Primary Examiner  
Art Unit 2872

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OIPE JC108  
 JUL 18 2005  
 PATENT & TRADEMARK OFFICE  
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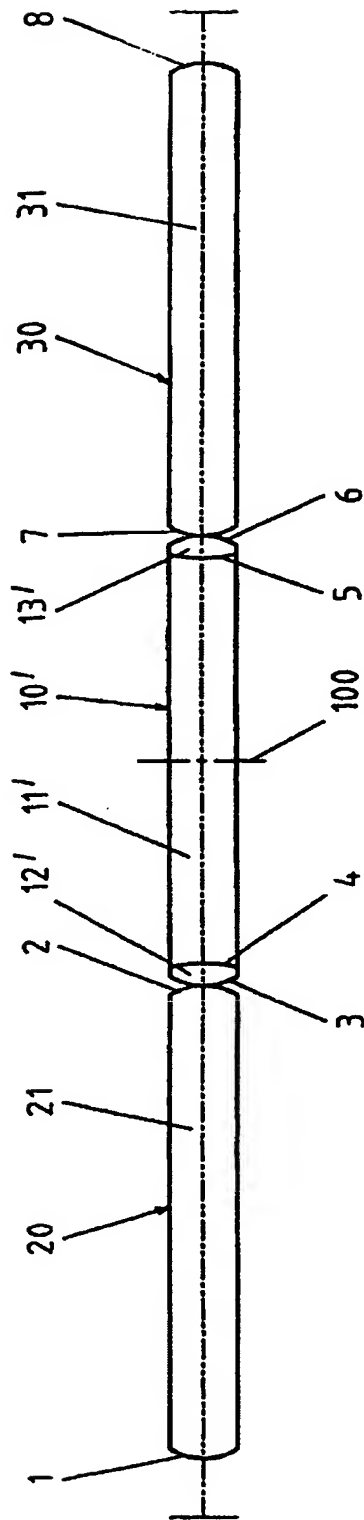


FIG.1

*Exh. 1000  
9/20/05*

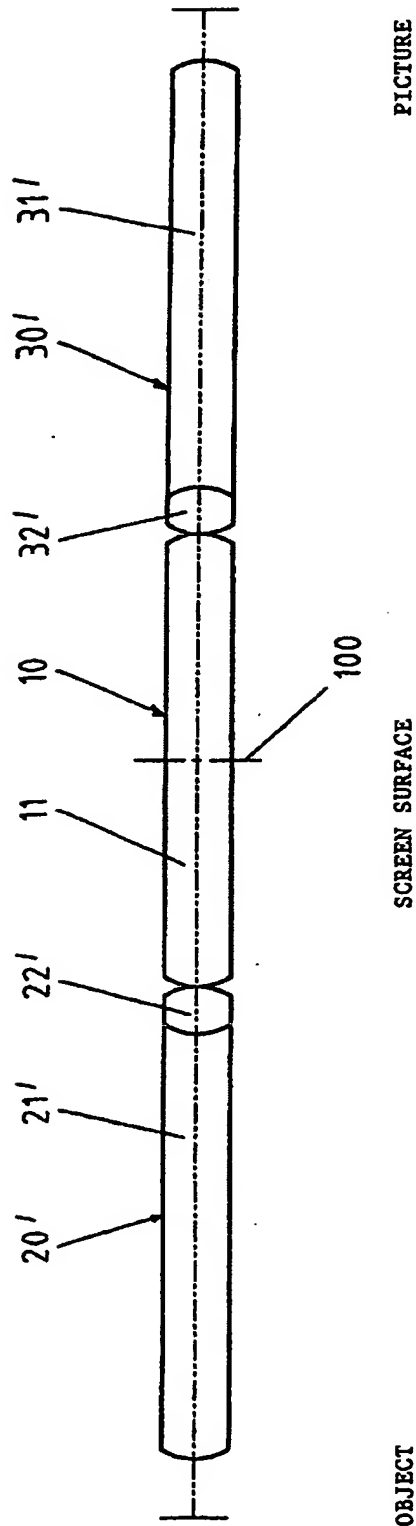


FIG.2

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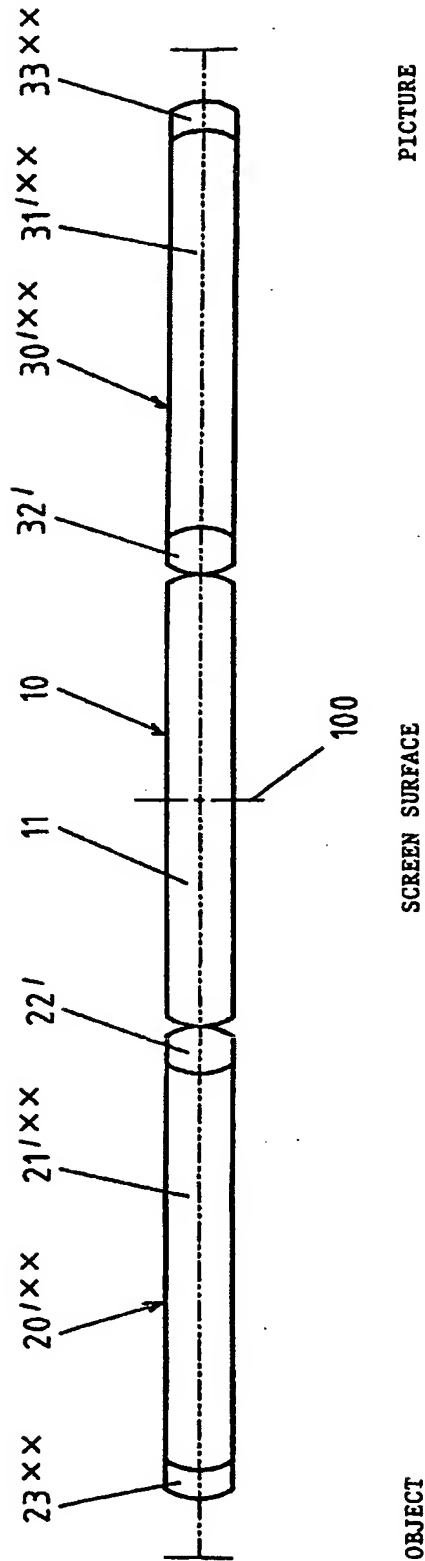
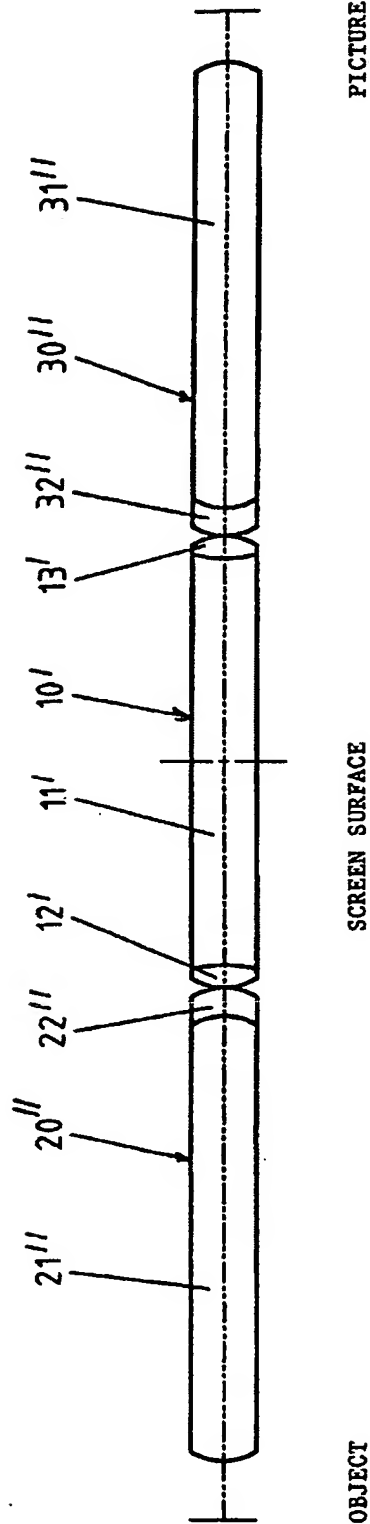


FIG.3



PICTURE

FIG. 4

Enhy signed  
9/28/05

*for by my  
 9/12/05*

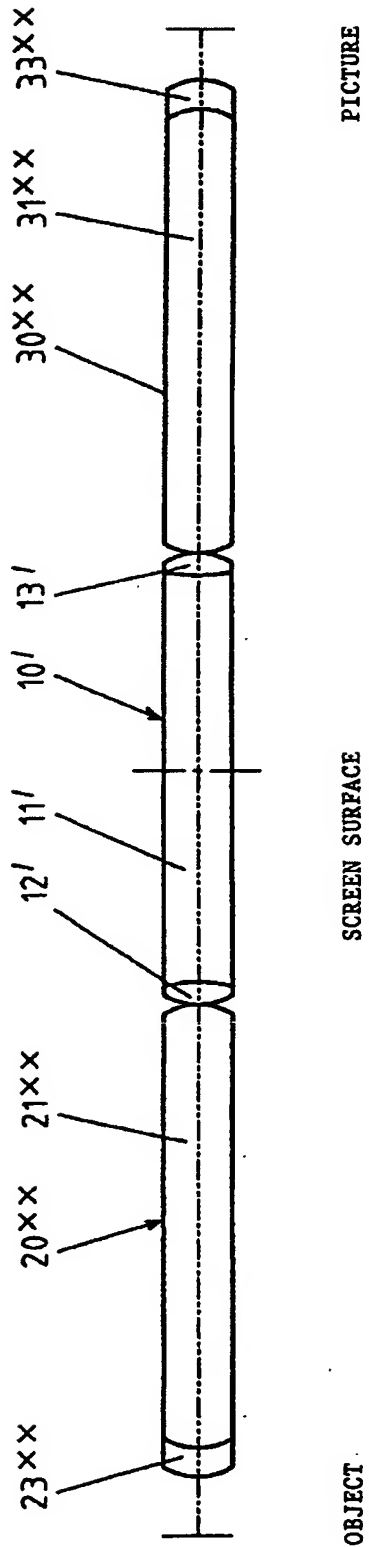


FIG.5



*For by my  
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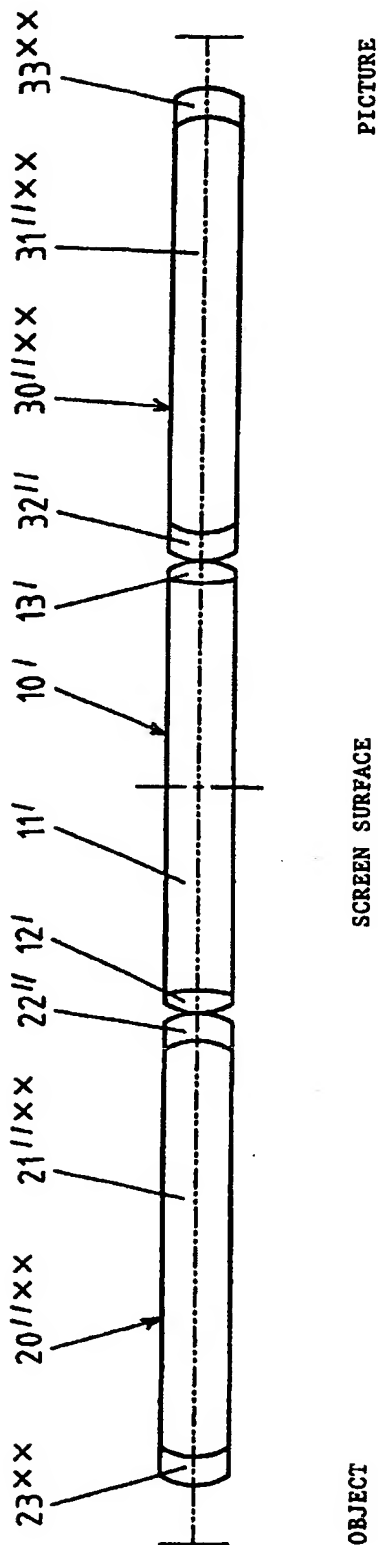
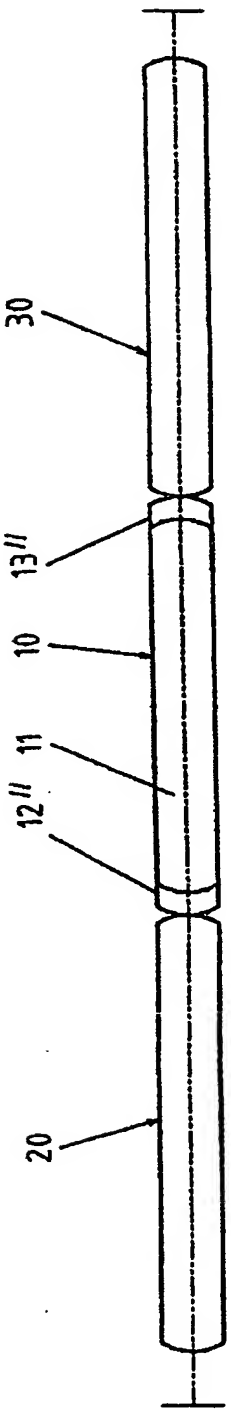


FIG.6

*Ex by oppm  
9/16/05*



PICTURE

SCREEN SURFACE

OBJECT

FIG. 7